

Application No. 10/713,004
Amendment dated April 11, 2005
Reply to Office Action mailed January 11, 2005

Amendments to the Claims:

Please cancel claims 1, 3, and 11, without prejudice.

Please amend claims 2, 4-6, 8-10, and 12, as specified in the following listing of claims.

The listing of claims given below will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Canceled)
2. (Currently amended) ~~The method as claimed in claim 1,~~ A method for operating at least one low-pressure discharge lamp using an inverter, an occurrence of a rectifier effect in said at least one low-pressure discharge lamp being monitored during the operation of the at least one low-pressure discharge lamp in order to determine the end of its life, wherein for a purpose of monitoring said rectifier effect of the at least one low-pressure discharge lamp, a d.c. voltage drop across electric connections of said at least one low-pressure discharge lamp, an electric power fed into said inverter, or a first variable which is proportional thereto, and a second variable correlated with a running voltage of said at least one low-pressure discharge lamp are evaluated, wherein said second variable correlated with the running voltage of ~~the~~ said at least one low-pressure discharge lamp is one of: (i) the an r.m.s. value of the an a.c. voltage component of the running voltage of said at least one low-pressure discharge lamp; and (ii) a constant value which corresponds to an average value of said running voltage which is characteristic of a lamp type of said at least one low-pressure discharge lamp.

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3. (Canceled)
4. (Currently amended) The method as claimed in ~~claim 1~~ claim 2, wherein ~~the~~ a product of the electric power fed into said inverter and ~~the~~ a quotient of the d.c. voltage drop across the electric connections of said at least one low-pressure discharge lamp and the second variable correlated with the running voltage of the at least one low-pressure discharge lamp is compared with a predetermined power value.
5. (Currently amended) The method as claimed in ~~claim 1~~ claim 2, wherein ~~the~~ a product of a predetermined power value and said second variable correlated with the running voltage of said at least one low-pressure discharge lamp is compared with ~~the~~ a product of the electric power fed into said inverter and the d.c. voltage drop across the electric connections of the at least one low-pressure discharge lamp.

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6. (Currently amended) ~~The method as claimed in claim 1,~~ A method for operating at least one low-pressure discharge lamp using an inverter, an occurrence of a rectifier effect in said at least one low-pressure discharge lamp being monitored during the operation of the at least one low-pressure discharge lamp in order to determine the end of its life, wherein for a purpose of monitoring said rectifier effect of the at least one low-pressure discharge lamp, a d.c. voltage drop across electric connections of said at least one low-pressure discharge lamp, an electric power fed into said inverter, or a first variable which is proportional thereto, and a second variable correlated with a running voltage of said at least one low-pressure discharge lamp are evaluated, wherein the electric power fed into said inverter, the d.c. voltage drop across the electric connections of said at least one low-pressure discharge lamp and ~~the~~ a r.m.s. value of ~~the~~ an a.c. voltage component of the running voltage of said at least one low-pressure discharge lamp are determined from measured values which are fed to a microcontroller, and a program-controlled evaluation is carried out by the microcontroller.

7. (Original) The method as claimed in claim 4, wherein the comparison is cyclically repeated during the lamp operation.

8. (Currently amended) The method as claimed in claim 7, wherein a counter operation is performed as a function of ~~the~~ a result of the comparison and a status bit is set or reset in the event of the counter overflowing.

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9. (Currently amended) The method as claimed in ~~claim 1~~ claim 2, wherein the values, which are determined at different points in time in the lamp operation, for ~~the~~ a difference between ~~the~~ a product of the electric power fed into said inverter and of the d.c. voltage drop across the electric connections of the at least one low-pressure discharge lamp and ~~the~~ a product of a predetermined power value and of the second variable correlated with the running voltage of the at least one low-pressure discharge lamp are added up and evaluated.
10. (Currently amended) The method as claimed in ~~claim 1~~ claim 2, wherein the electric power fed into said inverter is determined from ~~the~~ a voltage drop across a voltage divider which is arranged in parallel with ~~the~~ an input of said inverter, and from ~~the~~ a voltage drop across a resistor which is connected in series with an inverter transistor during a switching phase of said inverter and which at the same time has ~~all of the~~ a current of said inverter flowing through it.
11. (Canceled)

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12. (Currently amended) An operating device for at least one low-pressure discharge lamp having
- a half-bridge inverter, to which is connected a load circuit in which electric connections for said at least one low-pressure discharge lamp and at least one half-bridge capacitor are arranged,
 - a first measuring apparatus for measuring a first voltage which is proportional to ~~the~~ an electric power injected into said half-bridge inverter,
 - a second measuring apparatus for measuring a second voltage which is proportional to ~~the~~ a voltage drop across said at least one half-bridge capacitor,
 - a third measuring apparatus for measuring a third voltage which is proportional to ~~the~~ a r.m.s. value of ~~the~~ a running voltage of said at least one low-pressure discharge lamp,
 - a fourth measuring apparatus for measuring a fourth voltage which is proportional to ~~the~~ a supply voltage of said half-bridge inverter,
 - an evaluation unit which is connected to the outputs of said measuring apparatuses and comprises a program-controlled microcontroller and which serves ~~the~~ a purpose of evaluating said first voltage to said fourth voltage as well as of controlling said half-bridge inverter as a function of ~~the~~ a result of the evaluation.